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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/695,840	10/26/2000	Shinsuke Hemmi	Q61431	3264
7590	02/13/2008	Sughrue Mion Zinn Macpeak & Seas 2100 Pennsylvania Avenue NW Washington, DC 20037	EXAMINER MULLINS, BURTON S	
ART UNIT	PAPER NUMBER			2834
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 09/695,840	Applicant(s) HENMI ET AL.
	Examiner BURTON MULLINS	Art Unit 2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If no period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(o).

Status

- 1) Responsive to communication(s) filed on 19 December 2007.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1,2 and 21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) 1 and 2 is/are allowed.
- 6) Claim(s) 21 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
 3) Information Disclosure Statement(s) (PTO/SB/08)
 Paper No(s)/Mail Date 12/07
- 4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date _____
 5) Notice of Informal Patent Application
 6) Other: _____

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on 19 December 2007 has been considered by the examiner.

Claim Rejections - 35 USC § 103

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wakao et al. (US 5,785,145) and Southall (US 5,159,222). Wakao generally discloses applicant's invention including a brush holder for a dynamo-electric machine comprising a motor for an electric power steering apparatus (c. 1:5-8); the dynamo-electric machine rotatable in both directions (inherent); a brush holder 33 wherein a spring 36 and a brush 35 are disposed on a brush holder base (insulator) 34 (Fig.2;c.4:10-15); and a pigtail (lead wire) 37 having one end extending from an "introducing portion" (not numbered) of the brush 33 "in a direction parallel to a motor shaft" (Fig.2 shows pigtail 37 connected to brush 35, the pigtail extending axially from the "introducing portion" in a direction parallel to shaft 30), but differs in that the pigtail (lead wire) 37 does not extend from the introducing portion in the brush 35 "in the direction of the sliding axis of the brush" and further does not teach "a terminal plate connected to a second end of pigtail in an area within $\pm 45^\circ$ from the introducing portion in a direction of the sliding axis of the brush toward an outside of the brush holder...wherein a column extends from the terminal plate and connects with the second end of the pigtail and wherein the terminal plate and the second end of the pigtail

are connected in an area within the width of the brush along a radial direction of the brush holder.”

Southall teaches a brush holder plate 11 including brush cartridge 15, a brush 26 and coil spring 27S fit into the cartridge (Fig.3), and a brush terminal (spade connector) 23 electrically connected with a pigtail 25 at upper channel portion 24 (c.5, line 56-c.6, line 8). As seen in Fig.3, the pigtail 25 extends from the introducing portion in the brush 26 in a direction of the sliding axis of the brush 26, and the terminal plate 23 and the pigtail 25 are connected in an area within $\pm 45^\circ$ from the introducing portion toward the radial direction of the brush holder 11 (Figs.1&3). Further, the spade connector/terminal 23 inherently comprises a ‘column’ extending from the terminal plate due to the L-shape of the spade connector 23 (Fig.3). Finally, the terminal plate 23 and second end of the pigtail 25 are connected in an area within the width of the brush 26 along a radial direction of the brush holder 11 as apparent from Figs.1&3, which shows that the connection is generally along the same radius as the brush 26, within the width of the brush 26. Southall’s brush holder facilitates removal and replacement of worn commutator brushes (c.3, lines 22-34).

It would have been obvious to modify Wakao and provide a brush holder having a pigtail extending from the introducing portion in the brush in a direction of the sliding axis of the brush holder, the terminal plate and the pigtail connected in an area within $\pm 45^\circ$ from the introducing portion toward the radial direction of the brush holder, and a terminal with a column per Southall since these features would have facilitated removal and replacement of worn commutator brushes.

Response to Arguments

4. Applicant's arguments filed 19 December 2007 have been fully considered but they are not wholly persuasive.

5. Regarding the rejections under 35 USC 112, 2nd paragraph, these rejections have been removed in light of applicant's amendments and arguments. It is noted that in claim 21, the recitation "wherein the terminal plate and the second end of the pigtail are connected in an area within the width of the brush along a radial direction of the brush holder" further narrows the more general limitation of "a terminal plate connected to a second end of the pigtail in an area within ±45° from the introducing portion in a direction of the sliding axis of the brush".

6. Applicant's arguments regarding the rejection of claims 1-2 over Wakao and Hockaday are persuasive and the rejection has been removed. Claims 1-2 are allowed.

7. Regarding the rejection of claim 21 over Wakao and Southall, applicant argues that since the cartridges in Southall are all inclusive (i.e., they include the brush, pigtail and spring) there is no support that the structure within the cartridge facilitates removal and replacement of the cartridges.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the motivation for using Southall's snap-in commutator structure---which includes a

pigtail 25 extending from the introducing portion in the brush 26 in a direction of the sliding axis of the brush 26 (Fig.3)—is for facilitating removal and replacement of worn commutator brushes (Southall c.3, lines 22-34).

In response to applicant's argument that the placement of the pigtail and terminal is not related to the alleged motivation, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). It is clear from Southall c.3, lines 22-34 that a snap-in commutator structure would facilitate removal and replacement of worn commutator brushes.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Burton S. Mullins whose telephone number is 571-272-2029. The examiner can normally be reached on Monday-Friday, 9 am to 5 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on 571-272-2044. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/BURTON MULLINS/
Primary Examiner, Art Unit 2834

bsm
08 February 2008